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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,790	06/20/2003	Richard Joseph Fagan	674575-2003	8260

20999 7590 10/18/2006

FROMMER LAWRENCE & HAUG
745 FIFTH AVENUE- 10TH FL.
NEW YORK, NY 10151

EXAMINER	
HISSONG, BRUCE D	

ART UNIT	PAPER NUMBER
1646	

DATE MAILED: 10/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/600,790	FAGAN ET AL.	
	Examiner	Art Unit	
	Bruce D. Hissong, Ph.D.	1646	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-50* is/are pending in the application.

4a) Of the above claim(s) *11-50* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/28/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☒ Other: *sequence comparisons 1-3*.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1-10, in the reply filed on 8/28/2006 is acknowledged. The restriction requirement is therefore deemed proper and made FINAL.

2. Claims 1-50 are currently pending. Claims 11-50 are withdrawn as non-elected subject matter, and claims 1-10 are the subject of this office action.

Information Disclosure Statement

The information disclosure statements received on 8/28/2006 were fully considered by the Examiner.

Specification

1. The specification is objected to because of the following informalities: Page 70, line 15 recites TNF□ and IFN□.

2. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01. Specifically, page 16, line 13, and page 43, line 26 contain an embedded hyperlink.

3. The use of the trademarks BIGDYE (page 53, line 25), QIAPREP (page 55, line 20), WIZARD (page 55, line 21, and p 52, line 5), MONTAGE (page 55, line 27), and GATEWAY (page 57, line 5, and page 58, lines 1 and 9) have been noted in this application. Trademarks should be capitalized wherever they appear and be accompanied by the generic terminology. Although the use of trademarks is permissible in patent applications, the proprietary nature of

the marks should be respected and every effort made to prevent their use in any manner that might adversely affect their validity as trademarks.

Claim Objections

1. The Examiner suggests the syntax of claim 1 can be improved by amending the claim to read "An isolated polypeptide, wherein said polypeptide:"

2. The Examiner suggests that the phrase "four helical bundle cytokine fold", which appears throughout the claims, be amended to recite "four helical bundle cytokine fold family".

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

1. Claims 1-10 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims are drawn to a polypeptide comprising or consisting of the amino acid sequence recited in SEQ ID NO: 2, or fragments or functional equivalents thereof. The polypeptide of SEQ ID NO: 2, or fragments or functional equivalents thereof can exist in nature, and as written, the claims do not show the "hand of man" in the inventive process. Therefore, the claims are directed towards non-statutory subject matter. This rejection can be overcome by amending the claims to recite "An isolated polypeptide.....".

Claim Rejections - 35 USC § 112, first paragraph - enablement

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-10 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a polypeptide comprising of or consisting of the amino acid sequence of SEQ ID NO: 2, does not reasonably provide enablement for any fragment of

the polypeptide of SEQ ID NO: 2, or any "functional equivalent" of the polypeptide of SEQ ID NO: 2. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

The factors to be considered when determining if the disclosure satisfies the enablement requirement have been summarized as the quantity of experimentation necessary, the amount of direction or guidance presented, the presence or absence of working examples, the nature of the invention, the state of the prior art, the relative skill of those in the art, the predictability or unpredictability of the art, and the breath of claims. Ex Parte Forman, (230 USPQ 546 (Bd. Pat. App. & Int. 1986); In re Wands, 858 F.2d 731, 8 USPQ 2d 1400 (Fed. Cir. 1988).

The claims of the instant invention are drawn to a polypeptide comprising or consisting of the amino acid sequence as recited in SEQ ID NO: 2. The specification teaches that this polypeptide is an "interferon (IFN)-γ-like" protein of the four helical bundle cytokine fold family, and has biological properties similar to IFN-γ. The breadth of the claims is excessively broad, however, because the claims read on any fragment having an antigenic determinant in common with the polypeptide of SEQ ID NO: 2, or any polypeptide that is a "functional equivalent" of the polypeptide of SEQ ID NO: 2, or any polypeptide or fragment that is "homologous" to SQ ID NO: 2, wherein said polypeptide is "IFN-γ-like." However, the claims do not specify or require any specific function of the claimed polypeptide, or specify or define any degree of similarity/identity that would make a polypeptide "homologous" to the polypeptide of SEQ ID NO: 2. The specification does not provide guidance or examples of any polypeptide, other than that of SEQ ID NO: 2, that is capable of mediating any biological effect, and only requires that the polypeptide or fragment be "IFN-γ-like". Furthermore, the specification, on page 14, lines 13-16, states that the term "polypeptide" includes any peptide or protein comprising two or more amino acids. There is no guidance in the specification that would teach one of ordinary skill in the art how to make a peptide of only two amino acids that could function as an "IFN-γ-like" peptide, or a "functional equivalent" of the polypeptide of SEQ ID NO: 2. A skilled artisan would not be able to predict which fragments of the polypeptide of SEQ ID NO: 2 would retain "IFN-γ-like" biological activity, and similarly, would not be able to predict how to make all possible "functional equivalents" of SEQ ID NO: 2, or determine which polypeptides that are "homologous" to the polypeptide of SEQ ID NO: 2 without guidance from the specification or specific limitations in the claims reciting a particular function or percent identity/similarity, respectively.

The claims are also drawn to polypeptides with at least 80%, 90%, 95%, 98%, or 99% sequence identity to the polypeptide of SEQ ID NO: 2. However, the specification provides no guidance or examples which teach how to make any polypeptide with less than 100% sequence identity to SEQ ID NO: 2 that is still an "IFN-γ-like" polypeptide. It is known in the art that even single amino acid changes or differences in the amino acid sequence of a protein can have dramatic effects on the protein's function. As an example of the unpredictable effects of mutations on protein function, Mickle *et al* (Med. Clin. North Am., 2000, Vol. 84(3), p. 597-607) teaches that cystic fibrosis is an autosomal recessive disorder caused by abnormal function of a chloride channel, referred to as the cystic fibrosis transmembrane conductance regulator (CFTR – p. 597). Several mutations can cause cystic fibrosis, including the G551D mutation. In this mutation, a glycine replaces the aspartic acid at position 551, giving rise to the cystic fibrosis phenotype. In the most common cystic fibrosis mutation, Δ-F508, a single phenylalanine is deleted at position 508, giving rise to the cystic fibrosis phenotype. Thus, even the substitution or deletion of a single amino acid can have dramatic and *unpredictable* effects on the function of the protein. Thus, a person of ordinary skill in the art would require further, undue experimentation to make, and then use, all possible fragments having an antigen determinant in common with the polypeptide of SEQ ID NO: 2, or any "functional equivalent" of the polypeptide of SEQ ID NO: 2, or any polypeptide with at least 80%, 90%, 95%, 98%, or 99% sequence identity to the polypeptide of SEQ ID NO: 2.

In summary, due to the excessive breadth of the claims, which read on any "functional equivalent" or peptide fragment with an antigenic determinant in common with the polypeptide of SEQ ID NO: 2, the lack of guidance or examples in the specification that teach which of the many possible fragments of functional equivalents could be "IFN-γ-like", and the unpredictability inherent in the art regarding how to make and then use such fragments or functional equivalents or homologous polypeptides, a person of ordinary skill in the art would require further, undue experimentation in order to make and use any fragment, functional equivalent, or polypeptide with less than 100% identity to the polypeptide of SEQ ID NO: 2.

Claim Rejections - 35 USC § 112, first paragraph – written description

Claims 1-10 are rejected under 35 U.S.C. 112, first paragraph, containing subject matter which was not described in the specification in such a way as to reasonably convey to one

skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claims are drawn to the polypeptide recited in SEQ ID NO: 2, as well as any fragment having an antigen determinant in common with the polypeptide of SEQ ID NO: 2, any functional equivalent of SEQ ID NO: 2, and polypeptides having less than 100% sequence identity to SEQ ID NO: 2. The claims do not require the fragments, functional equivalents, or polypeptides with less than 100% sequence identity to SEQ ID NO: 2 of the instant invention to have any specific biological activity, nor any particular structure other than being functionally equivalent, a fragment of, or homology to SEQ ID NO: 2. Thus, the claims are drawn to a genus of polypeptides that is defined only by sequence relatedness to the polypeptide of SEQ ID NO: 2. In the instant case, this genus has not been adequately described in the instant specification, which only provides adequate written description of the polypeptide defined by SEQ ID NO: 2.

To provide adequate written description and evidence of possession of a claimed genus, the specification must provide sufficient distinguishing identifying characteristics of the genus. The factors to be considered include disclosure of complete or partial structure, physical and/or chemical properties, functional characteristics, structure/function correlation, methods of making the claimed product, or any combination thereof. In this case, the only factor present in the claims is a requirement that the claimed peptides by fragments of SEQ ID NO: 2, functional equivalents of SEQ ID NO: 2, or have at least 80% sequence identity to SEQ ID NO: 2, and be "IFN-γ-like". There is no identification of any particular portion of SEQ ID NO: 2 that must be conserved in order to produce a fragment, functional equivalent, or a polypeptide with less than 100% identity to SEQ ID NO: 2 that is "IFN-γ-like", or any disclosure defining or describing "IFN-γ-like" molecules. Accordingly, in the absence of sufficient distinguishing characteristics, the specification does not provide adequate written description of the claimed genus.

Claim Rejections - 35 USC § 112, second paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards

as the invention. The claims recite a polypeptide that is a "functional equivalent" of the polypeptide of SEQ ID NO: 2. The metes and bounds of this phrase are not defined by the claims, which do not specify any particular function for the claimed "functional equivalent".

2. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims recite a polypeptide, or fragment thereof, that is an "IFN-γ-like" secreted protein. The metes and bounds of the term "IFN-γ-like" are not defined by the claim, and thus the term "IFN-γ-like", which could mean similarity to IFN-γ structure, function, expression, etc., is indefinite.

3. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim recites a functional equivalent which exhibits "significant" structural homology with the polypeptide of SEQ ID NO: 2. The metes and bounds of the term "significant" have not been defined by the claim or the specification, which do not teach any degree of homology that would represent a "significant" homology.

4. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim recites a polypeptide which is a functional equivalent according to part (iii) of claim 1 and is homologous to the sequence of SEQ ID NO: 2. The claim does not specify any specific degree or percent homology, and thus the metes and bounds of the term "homologous" are not defined by the claim or the specification. The claims also do not define what type of homology the claimed polypeptide must possess, such as structural homology, functional homology, or something else.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1 and 4-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Penn *et al* US 2002/0048763A1). The claims of the instant invention are drawn to a polypeptide, wherein said polypeptide can be a fragment having an antigenic determinant in common with the polypeptide of SEQ ID NO: 2.

Penn et al teaches a polypeptide with several regions of identity to the polypeptide of SEQ ID NO: 2 (see sequence comparison 1). Specifically, the amino acids 22-26, 28-33, 57-61 of the polypeptide disclosed by Penn *et al* are identical to amino acids 14-18, 20-25, 49-53 of SEQ ID NO: 2 of the instant application, respectively. These regions of identity represent fragments with 100% identity to the polypeptide of SEQ ID NO: 2, and because they represent peptides of 4-5 amino acids, would be expected, in the absence of evidence to the contrary, to be antigenic fragments. Therefore, the polypeptide of Penn *et al* meets the limitation of claim 1 of the instant application. Furthermore, these peptide regions taught by Penn *et al* would also be at least 80%, 90%, 95%, 98%, or 99% identical to antigenic fragments of SEQ ID NO: 2, and thus Penn *et al* meets the limitations of claims 4-8. Also, because the metes and bounds of the limitation "significant structural homology" are not defined, the peptide regions taught by Penn *et al* would exhibit significant (i.e. 100%) structural homology to the polypeptide of SEQ ID NO: 2, thus meeting the limitations of claim 9. Finally, it is not clear if the fragment of claim 10 consists of 7 or more amino acids, or if the fragment of claim 10 has an antigenic determinant in common with a polypeptide having 7 or more amino acids. Because the claim can be interpreted either way, the peptide regions taught by Penn *et al* meet the limitations of claim 10 because they are fragments having an antigenic determinant in common with a polypeptide consisting of 7 or more amino acids (SEQ ID NO: 2).

2. Claims 1 and 4-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Drmanac et al (US 2005/0196754A1). Claim 1 of the instant invention is drawn to a polypeptide, wherein said polypeptide can be a fragment having an antigenic determinant in common with the polypeptide of SEQ ID NO: 2. Claim 10 is further drawn to the fragment of claim 1, wherein the fragment consists of 7 or more amino acid residues from the sequence of SEQ ID NO: 2.

Drmanac *et al* teaches a polypeptide with several regions of identity to the polypeptide of SEQ ID NO: 2 (see sequence comparison 2). Specifically, amino acids 127-136 of the polypeptide disclosed by Drmanac *et al* are identical to amino acids 37-46 of SEQ ID NO: 2 of the instant application. This region represents a region of 100% identity a fragment of SEQ ID NO: 2, is greater than 7 amino acids and could be considered, in the absence of evidence to the contrary, to represent an antigen fragment. Thus, the disclosure of Drmanac *et al* meets the limitations of claims 1 and 10 of the instant application. Furthermore, this peptide region taught by Drmanac *et al* would also be at least 80%, 90%, 95%, 98%, or 99% identical to an antigenic fragment of SEQ ID NO: 2, and thus Drmanac *et al* meets the limitations of claims 4-8. Also, because the metes and bounds of the limitation "significant structural homology" are not defined, the peptide region taught by Drmanac *et al* would exhibit significant (i.e. 100%) structural homology to the polypeptide of SEQ ID NO: 2, thus meeting the limitations of claim 9.

3. Claims 1-10 are rejected under 35 U.S.C. 102(f) because the applicant did not invent the claimed subject matter. The instant application, drawn to the polypeptide of SEQ ID NO: 2, or fragments or functional equivalents thereof, and copending application 10/872,858 drawn to the polypeptide of SEQ ID NO: 36, which is 100% identical to SEQ ID NO: 2 of the instant application (see sequence comparison 3), recite identical subject matter. However, inventors Boschert and Chvatchko of the instant application are not named as inventors of the copending '859 application which claims identical subject matter. Therefore, it is not clear that inventors Boschert and Chvatchko did indeed invent the claimed subject matter of the instant application.

Double Patenting

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

1. Claims 1-10 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-10 of copending Application No. 10/872,859. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented. The instant application is drawn to a polypeptide of the sequence defined by SEQ ID NO: 2, and fragments or functional equivalents thereof, as well as polypeptides having at least 80%, 90%, 95%, 98%, or 99% identity to the polypeptide of SEQ ID NO: 2. Claims 1-10 of copending Application 10/872,858 recite a polypeptide of the sequence defined by SEQ ID NO: 36, and fragments or functional equivalents thereof, as well as as polypeptides having at least 80%, 90%, 95%, 98%, or 99% identity to the polypeptide of SEQ ID NO: 36. Because SEQ ID NO: 2 of the instant application is 100% identical to SEQ ID NO: 36 of copending Application 10/872,859 (see sequence comparison 3), the two application recite identical subject matter.

2. Claims 1-10 are directed to the same invention as that of claims 1-10 of commonly assigned copending Application 10/872,859. The issue of priority under 35 U.S.C. 102(g) and possibly 35 U.S.C. 102(f) of this single invention must be resolved.

Since the U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP Chapter 2300), the assignee is required to state which entity is the prior inventor of the conflicting subject matter. A terminal disclaimer has no effect in this situation since the basis for refusing more than one patent is priority of invention under 35 U.S.C. 102(f) or (g) and not an extension of monopoly. Failure to comply with this requirement will result in a holding of abandonment of this application.

Conclusion

No claim is allowable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bruce D. Hissong, Ph.D., whose telephone number is (571) 272-3324. The examiner can normally be reached M-F from 8:30 am - 5:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Nickol, Ph.D., can be

reached at (571) 272-0835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BDH
Art Unit 1646

ROBERT S. LANDSMAN, PH.D
PRIMARY EXAMINER

Sequence comparison 1

US-09-864-761-39557
; Sequence 39557, Application US/09864761
; Patent No. US20020048763A1
; GENERAL INFORMATION:
; APPLICANT: Penn, Sharron G.
; APPLICANT: Rank, David R.
; APPLICANT: Hanzel, David K.
; APPLICANT: Chen, Wensheng
; TITLE OF INVENTION: HUMAN GENOME-DERIVED SINGLE EXON NUCLEIC ACID PROBES USEFUL FOR
; TITLE OF INVENTION: GENE EXPRESSION ANALYSIS BY MICROARRAY
; FILE REFERENCE: Aeomica-X-1
; CURRENT APPLICATION NUMBER: US/09/864,761
; CURRENT FILING DATE: 2001-05-23
; PRIOR APPLICATION NUMBER: US 60/180,312
; PRIOR FILING DATE: 2000-02-04
; PRIOR APPLICATION NUMBER: US 60/207,456
; PRIOR FILING DATE: 2000-05-26
; PRIOR APPLICATION NUMBER: US 09/632,366
; PRIOR FILING DATE: 2000-08-03
; PRIOR APPLICATION NUMBER: GB 24263.6
; PRIOR FILING DATE: 2000-10-04
; PRIOR APPLICATION NUMBER: US 60/236,359
; PRIOR FILING DATE: 2000-09-27
; PRIOR APPLICATION NUMBER: PCT/US01/00666
; PRIOR FILING DATE: 2001-01-30
; PRIOR APPLICATION NUMBER: PCT/US01/00667
; PRIOR FILING DATE: 2001-01-30
; PRIOR APPLICATION NUMBER: PCT/US01/00664
; PRIOR FILING DATE: 2001-01-30
; PRIOR APPLICATION NUMBER: PCT/US01/00669
; PRIOR FILING DATE: 2001-01-30
; PRIOR APPLICATION NUMBER: PCT/US01/00665
; PRIOR FILING DATE: 2001-01-30
; PRIOR APPLICATION NUMBER: PCT/US01/00668
; PRIOR FILING DATE: 2001-01-30
; PRIOR APPLICATION NUMBER: PCT/US01/00663
; PRIOR FILING DATE: 2001-01-30
; PRIOR APPLICATION NUMBER: PCT/US01/00662
; PRIOR FILING DATE: 2001-01-30
; PRIOR APPLICATION NUMBER: PCT/US01/00661
; PRIOR FILING DATE: 2001-01-30
; PRIOR APPLICATION NUMBER: PCT/US01/00670
; PRIOR FILING DATE: 2001-01-30
; PRIOR APPLICATION NUMBER: US 60/234,687
; PRIOR FILING DATE: 2000-09-21
; PRIOR APPLICATION NUMBER: US 09/608,408
; PRIOR FILING DATE: 2000-06-30
; PRIOR APPLICATION NUMBER: US 09/774,203
; PRIOR FILING DATE: 2001-01-29
; NUMBER OF SEQ ID NOS: 49117
; SOFTWARE: Annomax Sequence Listing Engine vers. 1.1
; SEQ ID NO 39557
; LENGTH: 93
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; OTHER INFORMATION: MAP TO AC004222.1
; OTHER INFORMATION: EXPRESSED IN PLACENTA, SIGNAL = 2.2
; OTHER INFORMATION: EXPRESSED IN BONE MARROW, SIGNAL = 2.1
; OTHER INFORMATION: EXPRESSED IN ADULT LIVER, SIGNAL = 2.4
; OTHER INFORMATION: EXPRESSED IN LUNG, SIGNAL = 2.2

; OTHER INFORMATION: EXPRESSED IN HELA, SIGNAL = 2.5
; OTHER INFORMATION: EXPRESSED IN HEART, SIGNAL = 2.3
; OTHER INFORMATION: EXPRESSED IN FETAL LIVER, SIGNAL = 2.3
; OTHER INFORMATION: EXPRESSED IN BRAIN, SIGNAL = 2.4
; OTHER INFORMATION: SWISSPROT HIT: O67087, EVALUE 5.20e-02
US-09-864-761-39557

Query Match 54.6%; Score 218; DB 3; Length 93;
Best Local Similarity 63.4%; Pred. No. 6e-16;
Matches 45; Conservative 6; Mismatches 20; Indels 0; Gaps 0;

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Qy          4 PNELNKLPWTNPGETEICDLSDTEFKISVLKNLKEIQDNTEKESRILSDKYKKQIEIIKG 63
              | || | |  ||||| ||||||   ||:||: |||| || |||  ||||| ::|| |
Db         12 PKELKKAPVINPGETAICDLSDRGVKIAVLRKLKEIHDNVEKEFGILSDKFNEEIETITK 71

Qy         64 NQAEILELRNA 74
              || |||| :||
Db         72 NQREILETKNA 82
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Sequence comparison 2

RESULT 5
US-10-450-763-35759
; Sequence 35759, Application US/10450763
; Publication No. US20050196754A1
; GENERAL INFORMATION:
; APPLICANT: Hyseq, Inc Drmanac et al
; TITLE OF INVENTION: NOVEL NUCLEIC ACIDS AND POLYPEPTIDES
; FILE REFERENCE: 790CIP3/US
; CURRENT APPLICATION NUMBER: US/10/450,763
; CURRENT FILING DATE: 2003-06-11
; PRIOR APPLICATION NUMBER: PCT/US01/08631
; PRIOR FILING DATE: 2001-03-30
; PRIOR APPLICATION NUMBER: 09/540,217
; PRIOR FILING DATE: 2000-03-31
; PRIOR APPLICATION NUMBER: 09/649,167
; PRIOR FILING DATE: 2000-08-23
; NUMBER OF SEQ ID NOS: 60736
; SOFTWARE: Custom
; SEQ ID NO 35759
; LENGTH: 142
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-450-763-35759

Query Match 51.1%; Score 204; DB 5; Length 142;
Best Local Similarity 75.0%; Pred. No. 3.4e-14;
Matches 39; Conservative 6; Mismatches 7; Indels 0; Gaps 0;

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Qy          1 MTSPNELNKLPWTNPGETEICDLSDTEFKISVLKNLKEIQDNTEKESRILSD 52
              ||||||::| | || ||||||| || |||::||: :||||||||||| |||||
Db         91 MTSPNEIDKAPGTNSGETEICDFSDREFKMAVLRKVKEIQDNTEKEFRILSD 142
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Sequence Comparison 3

RESULT 2
US-10-872-859-36
; Sequence 36, Application US/10872859
; Publication No. US20050112618A1
; GENERAL INFORMATION:
; APPLICANT: FAGAN, RICHARD JOSEPH
; APPLICANT: PHELPS, CHRISTOPHER BENJAMIN
; APPLICANT: GUTTERIDGE, ALEX
; APPLICANT: POWER, CHRISTINE
; TITLE OF INVENTION: SECRETED PROTEIN
; FILE REFERENCE: 674582-2003
; CURRENT APPLICATION NUMBER: US/10/872,859
; CURRENT FILING DATE: 2004-06-21
; PRIOR APPLICATION NUMBER: PCT/GB02/05914
; PRIOR FILING DATE: 2002-12-23
; PRIOR APPLICATION NUMBER: GB 0130720.6
; PRIOR FILING DATE: 2001-12-21
; NUMBER OF SEQ ID NOS: 59
; SOFTWARE: PatentIn Ver. 3.2
; SEQ ID NO 36
; LENGTH: 78
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: Synthetic
; OTHER INFORMATION: construct
US-10-872-859-36

Query Match 100.0%; Score 399; DB 5; Length 78;
Best Local Similarity 100.0%; Pred. No. 8.3e-36;
Matches 78; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db          1 MTSPNELNKLPWTNPGETEICDLSDTEFKISVLKNLKEIQDNTEKESRILSDKYKKQIEI 60

Qy         61 IKGNQAEILELRNADGTL 78
              ||||||||||||||||||
Db         61 IKGNQAEILELRNADGTL 78
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